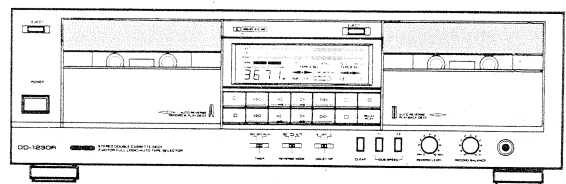


OPERATING INSTRUCTIONS  
MANUEL D'INSTALLATION ET D'UTILISATION  
BEDIENUNG SANLEITUNG  
INSTRUCCIONES DE FUNCIONAMIENTO



# DD-1230R

*Stereo Double Cassette Deck*  
*Magneto Casséte Stereo a Deux Platines*  
*Doppel-Stereo Cassettendeck*  
*Doble Platina Estereofonica Para Cassettes*

 **Sherwood®**



**Live Performance Sound™**



## Unpacking and Installation

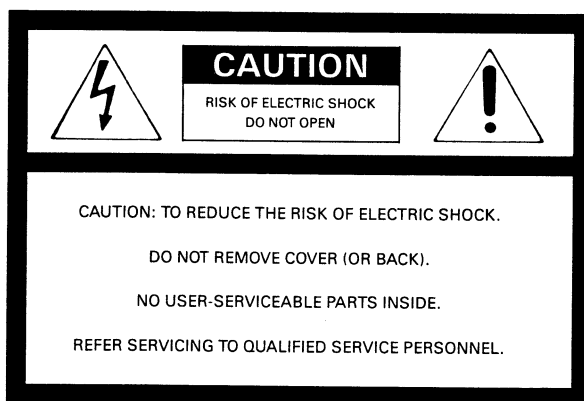
### ***Congratulations on Your Purchase!***

Your new high fidelity Tape Deck is designed to deliver maximum enjoyment and years of trouble free service. Please take a few moments to read this manual thoroughly. It will explain the features and operation on your Tape Deck and help insure a trouble free installation.

Please unpack your Tape Deck carefully. We recommend that you save the carton and packing material. They will be helpful should you ever need to move your unit and may be required if you ever need to return it for service. Your Tape Deck is designed to be placed in a horizontal position and it is important to allow at least two inches of space behind your unit for adequate ventilation and cabling convenience.

To avoid early damage, never place the unit near radiators, in front of heating vents, in direct sun light, or in excessively humid or dusty location.

Connect your complementary components as illustrated in the following section.



### **WARNING**

To prevent fire or shock hazard, do not expose the unit to rain or moisture.



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

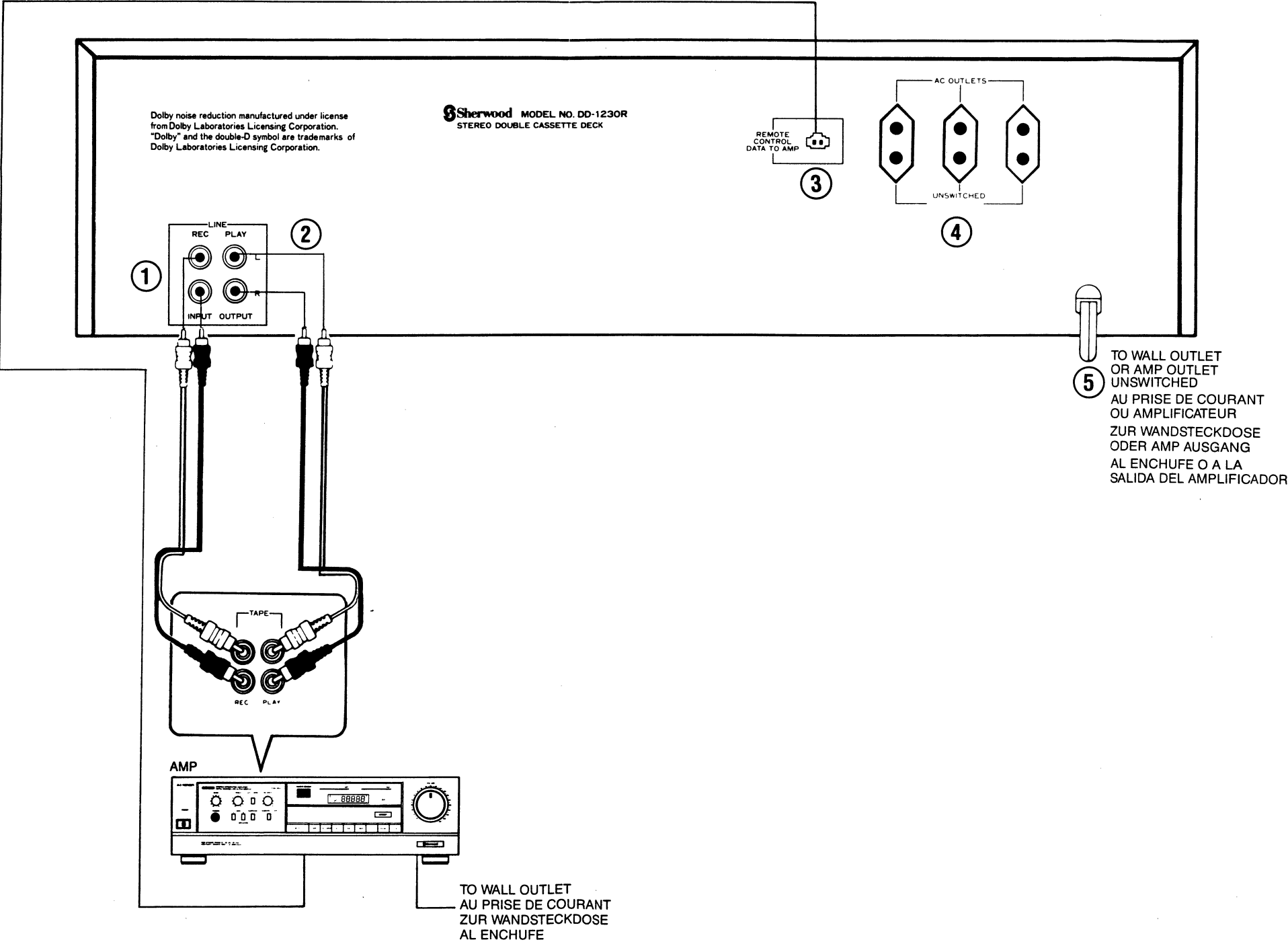


This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

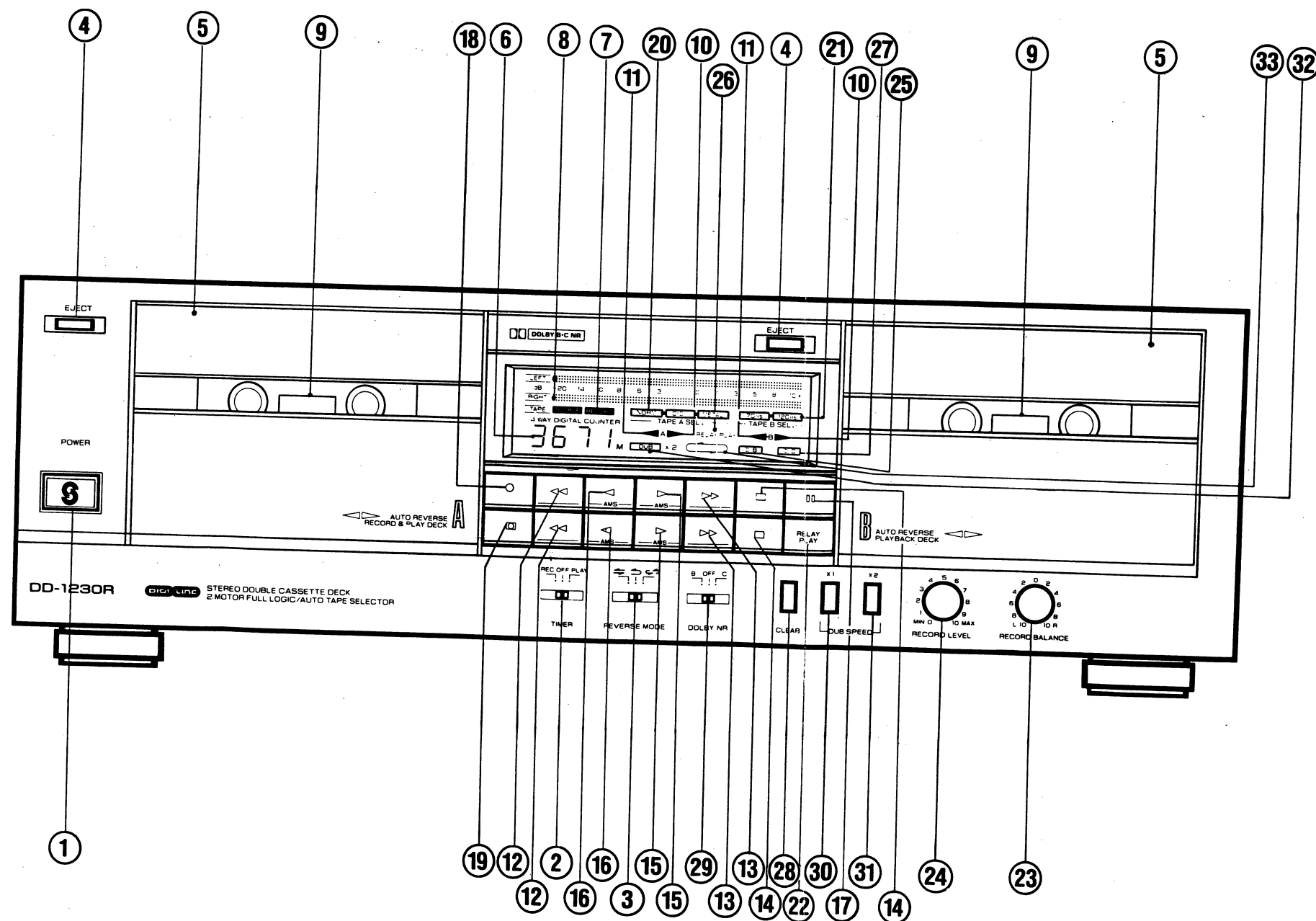
Caution: To prevent electric shock do not use this (polarized) plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted to prevent blade exposure.

Attentions: Pour prévenir les chocs électriques ne pas utiliser cette fiche polarisée avec un prolongateur, une prise de courant ou une autre sortie de courant, sauf si les lames peuvent être insérées à fond sans en laisser aucune partie à découvert.

Rear Panel Connections
Prises de l'Arriere
Anschlüsse In Der Rückwand
Conexiones En El Panel Posterior



**Front Panel Controls**  
**Commandes de l'Avant**  
**Bedienungselemente an der Vorderseite**  
**Conexiones en el Panel Posterior**



## Rear Panel Connections

### 1. LINE INPUT JACKS

Connect with the audio cords the LINE IN of this unit to the TAPE OUT or TAPE REC terminal of your Amplifier or Receiver.

Note: Make sure that the white lead (left) and red (right) are correctly connected.

### 2. LINE OUTPUT JACKS

Connect with the cords the LINE OUTPUT of this tape deck to the TAPE IN or TAPE PLAY terminal of your Amplifier or receiver.

### 3. REMOTE CONTROL DATA INPUT JACK

This jack is only useful if this unit is a part of Sherwood compatible remote controlled unit, such as AI-1210R, RA-1145R, RA-1240R or RV-1340R, etc. Connect this jack to the DECK data output jack on the rear panel of the compatible unit.

### 4. AC OUTLET (unswitched) (OPTIONAL)

### 5. AC INPUT CORD

Plug cord into AC outlet of other components or into the AC power supply source in your listening room.

## Front Panel Controls

### 1. POWER SWITCH (FUNCTION)


Press this switch to turn the power on. Press again to turn the power off.


### 2. TIMER SWITCH

When using an external timer, it is possible to initiate or terminate the record or playback modes at anytime of the day or night. For absentee operation, connect AC cord of this unit to your Timer and preset your Timer to the desired time. Turn the POWER on and set this switch to REC or PLAY mode after loading a cassette to be recorded or played, then recording or playing will automatically start at the preset time. For short confirmation of this operation, load a recorded cassette into the cassette holder, set the TIMER switch to PLAY mode and the POWER switch to ON, then the unit will start playing automatically a few seconds later. In normal operation, set this selector to OFF position.

### 3. REVERSE MODE SELECTOR/33. REVERSE MODE INDICATORS

a. : One side PLAY or REC

b. : SIDE A → SIDE B → STOP

c. : Continuous Auto Reverse

SIDE A → SIDE B → SIDE A → - -

WHEN REC or DUB

SIDE A → SIDE B → STOP

#### 4. EJECT BUTTON

Pressing this button opens the door softly for loading or removal of cassette. To open the door in PLAY or RECORD mode, press the stop button (■) first.

#### 5. CASSETTE DOOR

This air damped soft eject cassette door glides open smoothly. This door can be easily dismantled by pushing it up and then taking it out toward the front after opening the door. This gives easy access to the heads and transport parts for cleaning and demagnetizing. Press the eject button of the Deck to open the cassette door when Deck is in the stop mode.

#### 6. 4 WAY DIGITAL COUNTER/28. CLEAR BUTTON

Set the tape counter to "0000" at the beginning of the recording by pressing the CLEAR button (28), so that you can make a note of the digital setting at the start of each program to provide convenient tape index. Press CLEAR button to reset the counter to "0000".

#### 7. RECORD INDICATOR

This indicator will light up when REC button (18) is pressed, indicating that the deck is in recording mode. And the play (▶) indicator (10) will flicker at 0.5 second interval indicating that the deck is in recording pause mode.

#### 8. PEAK LEVEL DISPLAY

This LCD display (13 Segments/CH) indicates the recording or output (playback) level. This is useful in recording level adjustment.

#### 9. BACK LIGHTING INDICATOR

This indicator will light up while the power is on.

#### 10. FORWARD PLAY INDICATOR/11. REVERSE PLAY INDICATOR

These indicators will light up respectively when forward PLAY button (15) (▶) or reverse PLAY button (16) (◀) is pressed. When deck is in AMS search mode, these indicators flicker very fast (at 0.1 sec interval). In the PAUSE Mode, it will flicker at about 0.5 second interval.

#### 12. REWIND/13. FAST FORWARD BUTTON

- (12) ◀◀: Press this button, then tape is fast forward or rewind.  
forward PLAY mode : rewind  
reverse PLAY mode : fast forward
- (13) ▶▶: forward PLAY mode : fast forward  
reverse PLAY mode : rewind

#### 14. STOP BUTTON (■)

Press this button, then tape is in STOP mode.

#### 15. FORWARD PLAY/16. REVERSE PLAY BUTTON

- ▶: Press this button, then tape will be in forward play mode. This indicator (10) '▶' light up.  
◀: Press this button, then tape will be in reverse play mode. The indicator (11) '◀' light up.

### 17. PAUSE BUTTON (■)

Press this button when PLAY or REC mode, then tape will be in PAUSE mode, and the play indicator ► or ◀ will flicker at about 0.5 second interval.

\* This button is only available in A-DECK

### 18. REC BUTTON (●)

Press this button, then Deck will be in recording pause mode.

### 19. REC AUTO MUTE BUTTON (■)

This feature is provided for constant spacing between the recording selections in series recordings of selected musics from the radio or discs. This enables proper operation of Automatic Music Selection (AMS) in this unit.

- Press this button at the end of a recording selection, and tape will become blank for 4 seconds from the moment you release the button.
- Then this unit automatically engages normal REC PAUSE mode ready for the next recording.
- At the beginning of next recording selection, press play button again, then recording will start immediately.

### 20. A-DECK TAPE INDICATORS/21. B-DECK TAPE INDICATORS

When a tape is loaded, the deck's circuitry will automatically adjust for proper bias level and equalization for that type of tape, and the type of tape (Normal, CrO<sub>2</sub>, Metal) will be indicated for A-DECK, (70μs or 120μs) for B-DECK.

### 23. REC BALANCE CONTROL

This control adjusts balance of the left and right channel in recording mode.

### 24. REC LEVEL CONTROL

This control adjust the input level of the signal coming from the rear panel LINE INPUT jacks for recording, and the adjustable signal level is displayed on the PEAK LEVEL DISPLAY ⑧.

### 22. RELAY PLAY BUTTON/26. RELAY PLAY INDICATOR

When this button is pressed, then RELAY PLAY INDICATOR ②⑥ will light up the Deck A and Deck B are in the relay playback made from Deck B to Deck A, or vice versa.

See the RELAY PLAYBACK section for detailed operations.

### 25, 27. DOLBY\* NR INDICATORS



These indicators light up respectively in Dolby B and C NR mode.

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

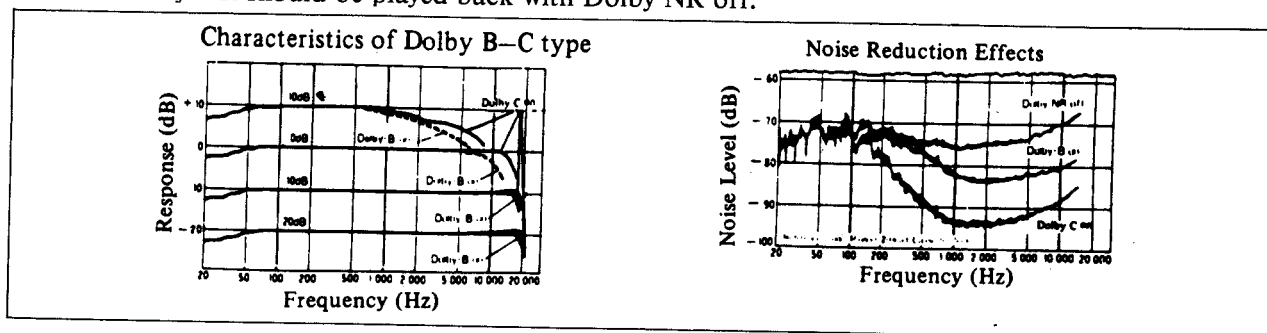
### 29. DOLBY NR SELECTOR

Dolby noise reduction is an extremely effective method of reducing background hiss on tapes. DD1230R incorporates both Dolby B and C NR system.

NOTE:

1. The most commercially available recorded tapes with '  ' mark are recorded with Dolby B NR. Tapes recorded with Dolby C NR have '  ' mark.
2. Tapes recorded with Dolby B NR should be played back with Dolby B NR selector to B Type, and tapes

recorded with Dolby C NR should be played back with Dolby NR selector set to C Type. Tapes recorded without Dolby NR should be played back with Dolby NR off.



### • PRINCIPLE OF DOLBY NR SYSTEM

The Dolby NR system functions so that it automatically increases recording levels of medium and high frequencies when the recording signal level is lower than the specified level (encoding), and automatically reduces the output level to the normal level during playback (decoding). In this way, the tape hissing noise is remarkably reduced without affecting the sound quality. The Dolby NR system used in your Tape Deck improves S/N ratio by about 5 dB at 1 KHz and about 10 dB at 10 KHz in B-type and by about 20 dB on the most frequency range in C-type. Furthermore C-type has the anti-saturation network which reduces the affects of high frequency saturation, improving high range frequency response.

### 30. NORMAL SPEED DUB BUTTON

Touch this button, the Deck A and Deck B are Normal Speed Dubbing mode.

\* NR SELECTOR is available in this mode.

### 31. DOUBLE SPEED DUB BUTTON

Touch this button Deck A and Deck B are in Double Speed Dubbing Mode.

\* During dubbing mode, touching the STOP button (14) will cause Deck B and Deck A to stop.

### 32. DUB INDICATOR

In normal speed dubbing mode indicator "DUB" will light up and double speed dubbing mode "DUB×2" will light up.

## Playback

1. Set TIMER switch to OFF position.
2. Set REVERSE MODE switch to desired position.
3. Turn the power on.
4. Press the EJECT button.
5. Load recorded cassette tape into the cassette holder with the tape side to be played facing in front.
6. To play the tape recorded with Dolby NR, see No. 29 of page 10.
7. Press the PLAY button. The tape will now start playing. Adjust the volume, tone, etc. on your amplifier to suit to your listening preference.
8. To stop playing momentarily, press the PAUSE button. To start playing, press the PLAY button again. (A-DECK only)
9. To stop playing completely, the STOP button and press the EJECT button in sequence to open the door for removal of the cassette tape. When the tape reaches the end, playing stops automatically.

\* See No. 3 (Reverse mode selector) of page 8.



## AMS Playback

This AMS (Automatic Music Selection) playback is provided for easy selection of music you want to hear from a cassette tape. During playback, press the fast forward or rewind button, then the tape skips one music.

## Recording

1. Set TIMER switch to OFF position.
2. Set REVERSE MODE SWITCH to desired position.
3. Turn the power on.
4. Press EJECT button.
5. Set the function selector on the amplifier to the program source you wish to record; PHONO, TUNER, COMPACT DISC, etc.
6. With the tape side to be recorded facing in front, load the cassette into the cassette holder.  
\* Make sure that the cassette erasure tab on the upper edge has not been removed.
7. To make a recording in Dolby NR mode, see No. 29 of page 10.
8. To control the beginning of recording for adjustment, press the REC button first, then the 'RECORD' indicator ⑦ will light up indicating that the Deck is in recording pause mode.
9. Adjust the recording level with the REC LEVEL CONTROL Knob ⑭ so that the LED PEAK LEVEL display ⑧ indicates about 0 dB (+3 dB for METAL) at the peak reading of program selected. Refer to the RECORDING LEVEL ADJUSTMENT section (page 13) for details.
10. Press the PLAY button (◀ or ▶), then Deck will start recording.
11. When the recording is finished, press the STOP button.  
When the tape reaches the end while recording, Deck will stop automatically.  
\* See No. 3. (Reverse mode selector) of page 8.

### NOTE:

- If the cassette erasure tab on the upper edge has been removed, recording will not function.
- You can monitor the recording for quality check by speakers by pressing the TAPE monitor switch on your amplifier.
- To erase a tape without adding new recording, set REC LEVEL control to zero and press the RECORD and PLAY buttons sequentially.
- To review the just recorded selection, use the tape counter. Press button ⑳ to set the tape counter to "0000" at the beginning of every recording and rewind to "0000" after recording for review.

## Synchro Dubbing from Deck B to Deck A

1. Set TIMER START SELECTOR to its OFF position.
2. Set REVERSE MODE SWITCH to desired position.
3. Turn the power on.
4. Load a pre-recorded cassette into the cassette holder on Deck B.
5. Load a blank cassette (or pre-recorded cassette to replace with new recording) into the cassette holder on Deck A. Check to make sure that the cassette erasure tab on the upper edge has not been removed.
6. Touch the dubbing button (DUB or DUB×2).
7. To stop dubbing, touch the STOP button.

**NOTE:**

- When dubbing, the Dolby NR circuits are automatically bypassed for copying a tape, but operative for the monitoring output.

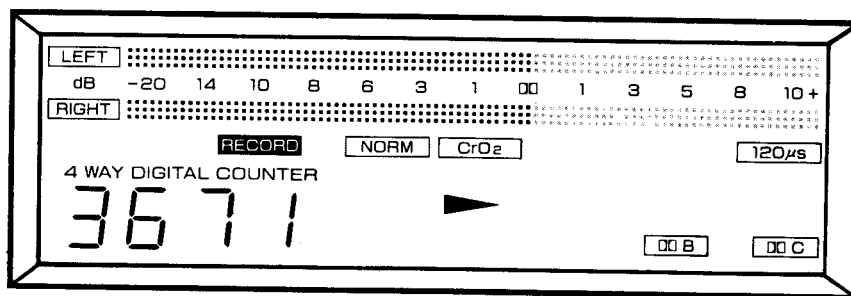
If the original tape is recorded without Dolby NR, it will make a copy recorded without Dolby NR. In this case, set the Dolby NR switch to OFF for monitoring purpose.

If the original tape is recorded with Dolby NR, it will make a copy recorded with Dolby NR. In this case, set the Dolby NR switch to ON for monitoring purpose.

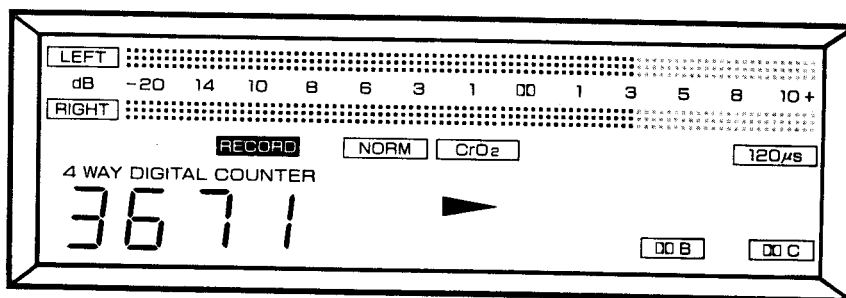
- When dubbing, the LINE REC LEVEL control is bypassed also and make a copy at the same level as that of original tape, so you do not need any adjustment for these controls. Sometimes it will make a copy with a little higher or lower output because of different recording level between brand names of tape.
- Even DOUBLE SPEED dubbing can make a copy two times faster than NORMAL SPEED, we recommend to dub at NORMAL SPEED if better sound quality also with possibility of sound monitoring or skipping selection is required.

**RECORDING LEVEL ADJUSTMENT**

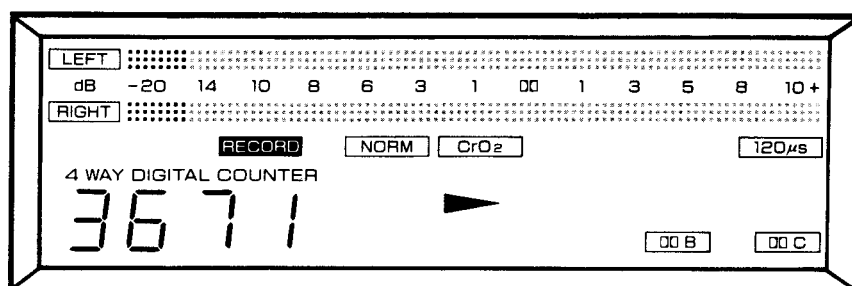
High recording level is recommended to reduce tape noise, but overloaded and distorted tape result if the level is too high. Generally, recording levels should be adjusted so that the level meters indicate as fully as possible to the proper level shown at below for NORMAL and CrO<sub>2</sub> tape except METAL tape. The METAL tape permits recording level up to +3 dB higher position on the level meters.



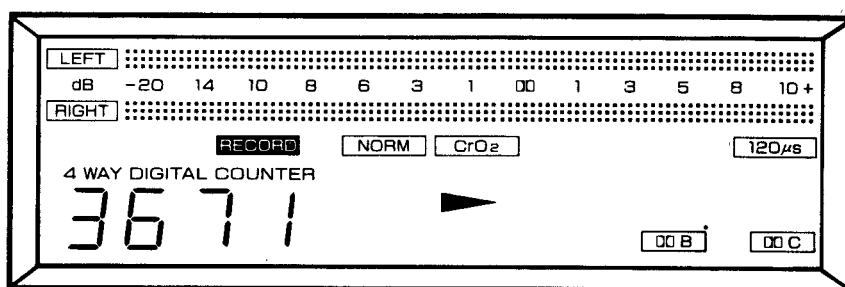
Proper Setting (Fe and CrO<sub>2</sub> tape)



Proper Setting (METAL tape)



Too Low Setting (noisy tape)



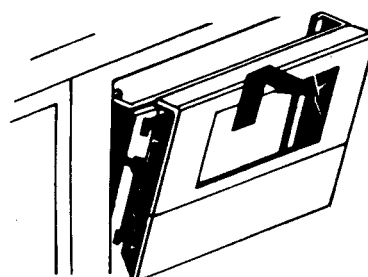
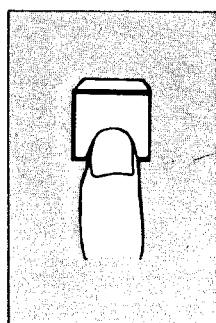
Too High Setting (distorted tape)

## Maintenance

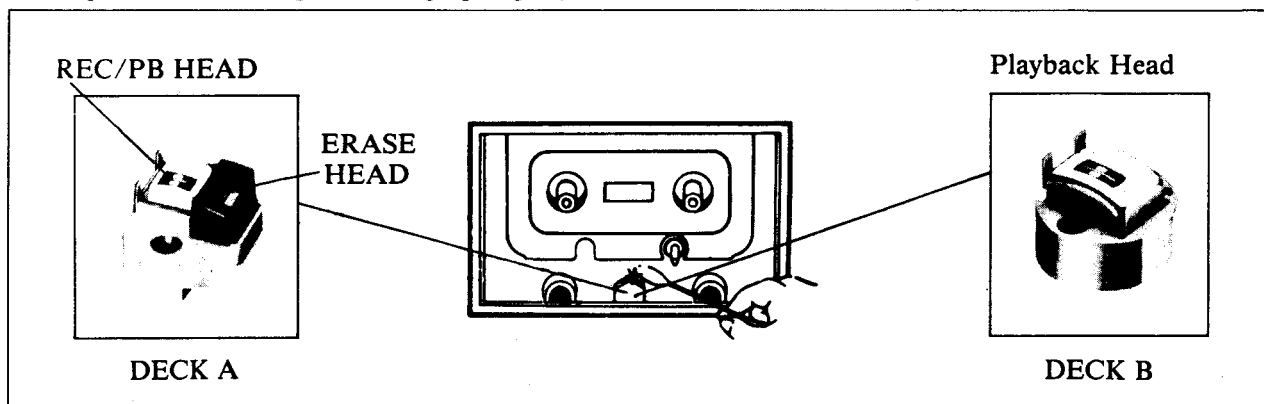
### CLEANING OF HEADS AND TAPE PATH

Generally, cleaning after every 10 hours of operation will be sufficient. However, all surfaces over which tape travels should be cleaned before making high quality recordings.

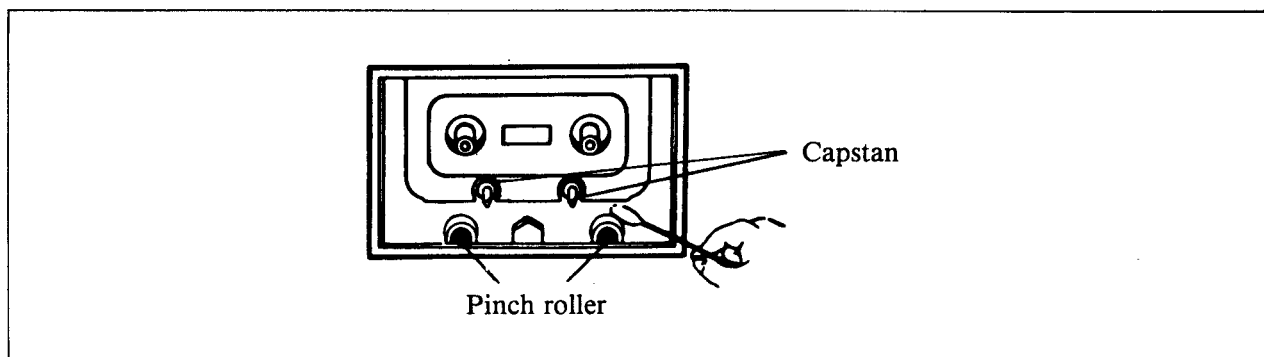
1. Set the POWER switch to OFF and remove cassette door lid by pushing it up and then taking it out toward the front side after opening the door.



2. Wipe the heads using a cleaning tip slightly moistened with commercially available head cleaner.

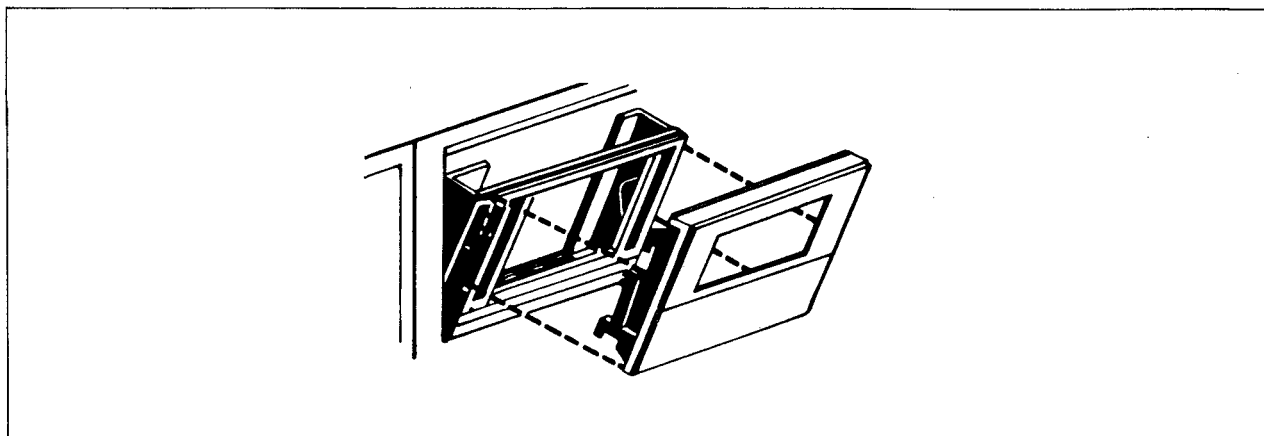


3. Wipe the capstan and pinch roller using another cleaning tip slightly moistened with the commercially available rubber cleaner.



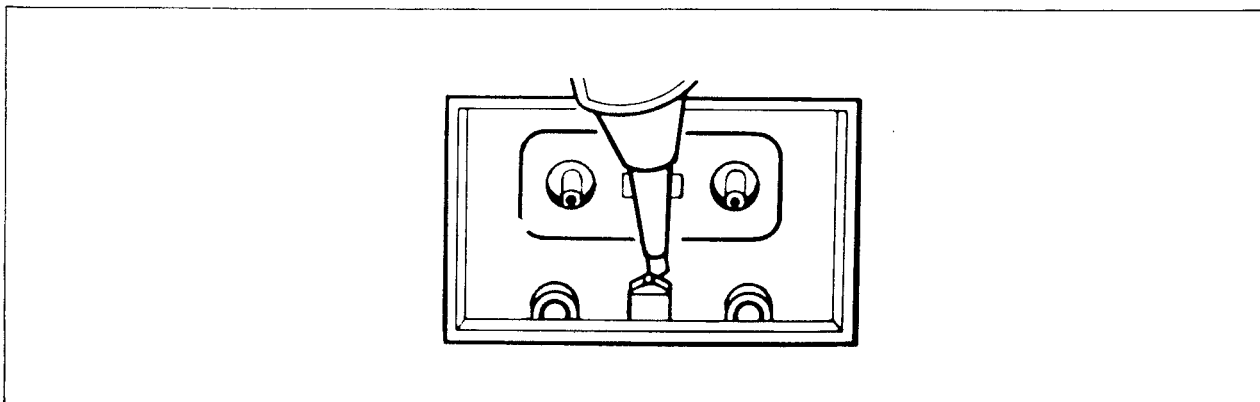
4. Replace the door lid.

- Do not insert a cassette until the cleaner has completely dried.



## DEMAGNETIZING HEADS

Residual magnetism will gradually build up on the heads through continuous use and cause erasure of high frequencies and hiss. The heads and metallic parts of the tape path should be demagnetized after 20-30 hours of operation with a commercially available head demagnetizer. Be sure the cassette deck is turned off.



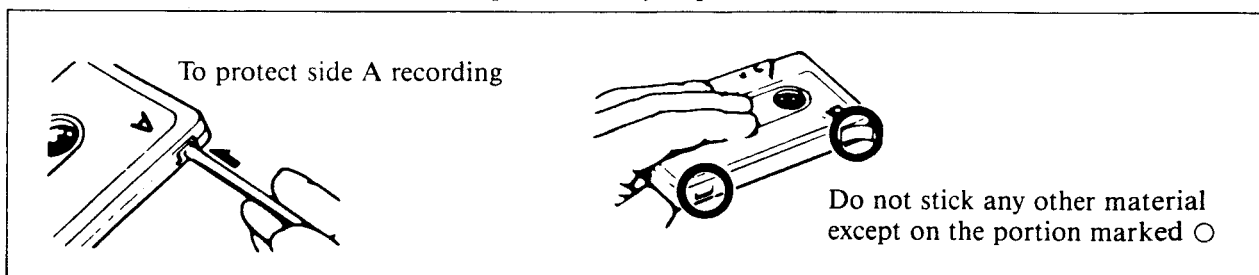
## CLEANING CABINET

Clean the cabinet, panel and controls with a soft cloth lightly moistened with mild soap solution. Do not use any type of scouring powder or solvent such as alcohol or benzine.

## *Note on Cassettes*

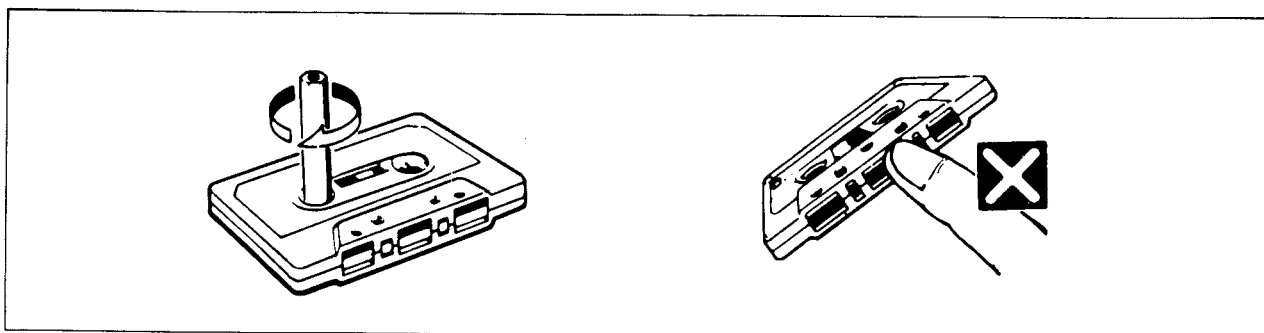
### TO PROTECT RECORDING FROM ACCIDENTAL ERASURE

Remove the tab as illustrated so that the REC cannot be activated. To record on a cassette after tabs have been removed, simply cover the slot with cellophane or vinyl tape.

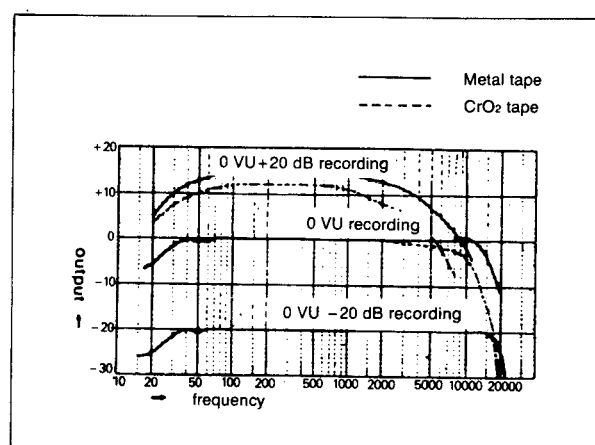


## CASSETTE CARE

- From a tape length point of view, most of the tape manufacturers use C-60's (30 min×2) as their standard, some C-90's (45 min×2) and C-120's (60 min×2) less often. If the length of the tape is longer it can stretch and become soft. We would like to recommend that you use C-60 or C-90 tapes for better quality sound and safe tape operation. C-120 cassette tape is so thin and soft that, if the capstan or pinch roller is even slightly dirty, it often coils around the capstan or pinch roller and results in tape breakage, so if you use C-120 tape, perfectly clean capstan and pinch roller.
- Before inserting a cassette, take up the slack of the tape to prevent it from becoming entangled around the capstan.
- Avoid touching the tape surface of a cassette. Protect it from dust by storage in a case. Even minor dirt of dust could cause contamination of the heads resulting in noise and sound drop-out.

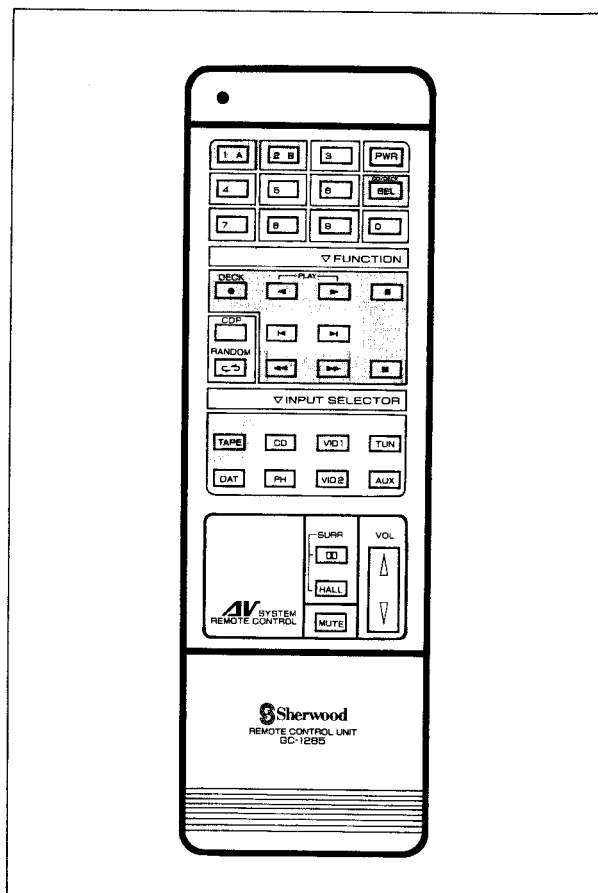


- Keep cassettes away from magnetic equipment such as speakers, amplifier, etc. as erasure or distortion of your recorded tape could occur. Do not expose a cassette to direct sunlight, extreme cold temperature or moisture.
- Avoid rewinding or winding in fast forward mode just before storing a cassette tape as this may cause stretching of the tape edge if it is left over a period of time.
- Do not stick any thick paper or tape on the cassette, as this may effect tape contact with the head.
- METAL Tape is the latest development in cassette technology, an advance that allows the cassette deck to complete on equal audio terms with the new generation of amplifiers, tuners and turntables. Comparing with CHROME tape, METAL tape has better signal to noise ratio, wider frequency response and higher MOL (maximum output level).



## DIGI-LINK System Remote Control Operations

1. DD1230R can be remotely controlled if this unit is a part of Sherwood compatible master component as amplifier (model No. AI-1210R) or receivers (model No. RA-1145R, RA-1240R and RV-1340R, etc.).
2. Applicable control buttons on the remote commander of master unit are Record (●), Forward Play (▶), Reverse Play (◀), Stop (■), Fast Forward (▶▶), Rewind (◀◀), Pause (■ ■) 'TAPE', SEL, A and B.
3. To remotely control this unit, press button 'TAPE' first on the commander prior to pressing other function buttons except recording.
4. Recording starts immediately with one touch operation without pressing button 'TAPE' first. In this case to stop recording press the Record (●) button again.
  - Recording direction must be set before starting recording by commander.
  - Recording direction can be changed while recording by pressing button 'TAPE' SEL, A and ▶ or ◀ in sequence.
  - To stop recording, press button 'TAPE' and 'STOP' in sequence.
- AMS operation can also be operated by commander in the same manner as unit itself operation. Press ▶▶ or ◀◀ while playing.



## ***Troubleshooting Guide***

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Re-read the operating instruction carefully to be sure the unit is being operated properly. You will usually find a quick solution to most problems mentioned in the following chart.

<b>PROBLEM</b>	<b>POSSIBLE CAUSE</b>	<b>CORRECTIVE ACTION</b>
No power turn on	<ul style="list-style-type: none"><li>• AC cord accidentally disconnected.</li></ul>	<ul style="list-style-type: none"><li>• Check AC cord is plugged into AC outlet properly.</li></ul>
No playback	<ul style="list-style-type: none"><li>• Unit is not connected properly to amplifier.</li><li>• Amplifier is not set properly.</li></ul>	<ul style="list-style-type: none"><li>• Check cables between deck and amplifier.</li><li>• Depress corresponding Tape MONITOR switch.</li></ul>
Distorted sound	<ul style="list-style-type: none"><li>• Tape heads are dirty</li><li>• Cassette tape is badly stretched.</li></ul>	<ul style="list-style-type: none"><li>• Clean the heads.</li><li>• Replace the cassette.</li></ul>
Tape speed is erratic	<ul style="list-style-type: none"><li>• Capstan or pinch rollers are dirty.</li></ul>	<ul style="list-style-type: none"><li>• Clean the capstan and pinch rollers.</li></ul>
Audible Hum	<ul style="list-style-type: none"><li>• Audio cables are not connected.</li><li>• Pick up AC magnetic field.</li></ul>	<ul style="list-style-type: none"><li>• Check plugs on both deck and amplifier.</li><li>• Increase distance between deck and other components or equipments.</li></ul>
No recording	<ul style="list-style-type: none"><li>• Erasure tabs on the cassette have been removed.</li><li>• Line REC Level controls are at the minimum.</li></ul>	<ul style="list-style-type: none"><li>• Cover the openings with adhesive tape.</li><li>• Increase REC LEVEL controls</li></ul>



## Specifications

Type	Logic controlled front loading stereo double cassette deck with remote control and Dolby NR type B-C system	
Track system	4 track, 2 channel stereo playback (Deck B) and recording/playback (Deck A)	
Recording system	AC bias system (bias frequency: 105 KHz)	
Erasing system	AC system	
Tape speed	1-7/8 ips (4.76 cm/sec)	
Heads	Rotary reverse head (REC/Playback head×1, Erase head×1)	
Motor	High torque DC motor	
Wow and flutter	Less than 0.10% (WRMS)	
Fast winding time	Approximately 90 seconds with C-60 cassette tape	
Frequency response	Signal to noise ratio (REC/PB)	Normal tape 30-15,500 Hz
- 20 dB REC		(35-14,500 Hz ± 3 dB)
		CrO <sub>2</sub> tape 30-16,000 Hz
		(35-15,000 Hz ± 3 dB)
		METAL tape 30-16,500 Hz
		(35-15,500 Hz ± 3 dB)
		METAL tape (30-13,000 Hz ± 3 dB)
		Dolby NR-B ON 64 dB (Normal tape)
		(weighted) 65 dB (CrO <sub>2</sub> tape)
		64 dB (METAL tape)
		Dolby NR-C ON 73 dB (Normal tape)
		(weighted) 74 dB (CrO <sub>2</sub> tape)
		73 dB (METAL tape)
		Dolby NR OFF 55 dB (Normal tape)
		(weighted) 56 dB (CrO <sub>2</sub> tape)
		55 dB (METAL tape)
Input sensitivity/Impedance	LINE 70mV/47K ohms	
Output level/Impedance	LINE 500mV/1.2K ohm	
Built-in features	Dolby NR B-C system with indicators.	
	Full auto stop mechanism in all modes	
	Soft eject operating with air damper.	
	Soft touch logic controlled transport with PLAY, REC and DUB indicator	
	Automatic music selection (Deck A and Deck B)	
	LCD peak display	
	Auto reverse (Deck A and Deck B)	
	Timer REC and Play	
	Synchronous dubbing and Relay playback	
	Auto tape selector (Deck A and Deck B)	
Power consumption	20 Watts	
Dimensions	440 (W)×175(H)×280(D) mm	
	17.3(W)×4.9(H)×11(D) inches	
	6.2Kg/13.6 Lbs	

NOTE: Specifications and the design subject to change without notice for improvements.